

Quebec researchers find possible coronavirus treatment, but some remain skeptical

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PUBLISHED JANUARY 28, 2021

PUBLISHED JANUARY 28, 2021

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In the quest to keep COVID-19 patients out of hospital, the ideal treatment would be a cheap, widely available pill that could be taken immediately after a positive test.

Quebec researchers think they've found a medication that fits that bill with Colchicine, a centuries-old compound derived from the autumn crocus that is most often used to treat gout – but other experts say more proof is needed before the drug is prescribed routinely for COVID-19.

The Montreal Heart Institute on Wednesday released data from an 10-month clinical trial showing Colchicine reduced hospital admissions by 25 per cent; the need for mechanical ventilation by 50 per cent; and deaths by 44 per cent among patients with lab-confirmed cases of COVID-19 who started taking the drug within 24 hours of testing positive.

The findings, which have yet to be peer reviewed, were greeted with a mix of cautious optimism and skepticism by infectious disease and critical care physicians, some of whom said the number of participants who were mechanically ventilated or died was too small for them to draw meaningful conclusions.

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"The findings are intriguing, but it's important not to overhype them," said John Marshall, a critical-care physician at St. Michael's Hospital, part of Unity Health Toronto, and the co-chair of a World Health Organization working group looking at the best ways to care for coronavirus patients.

He was not involved in the Colchicine trial.

Colchicine is the first old drug to show promise in the early, viral phase of COVID-19 disease. The antiviral Remdesivir and monoclonal antibodies – both of them new drugs approved specifically for COVID-19 – have also produced encouraging results when given soon after symptoms emerge.

But both treatments are administered by IV, a hurdle to their use outside hospitals in Canada. Colchicine, by contrast, is a cheap tablet that patients could pick up from the local pharmacy with a doctor's prescription.

"We have the first [repurposed] drug that reduces the composite of death and hospitalization and prevents patients from coming to hospital, and it was done in Canada," lead researcher Jean-Claude Tardif said of the trial. "We all are absolutely convinced this should change medical practice."

Dr. Tardif, a cardiologist and director of the Montreal Heart Institute's research centre, previously led successful clinical trials of Colchicine in patients with heart disease. When the pandemic hit, he wondered whether the drug's anti-inflammatory properties could help tamp down the overactive immune response that makes some COVID-19 patients severely ill.

To find out, Dr. Tardif and his colleagues in four countries recruited nearly 4,500 patients, all of whom had at least one risk factor for severe COVID-19. Participants started a 30-day course of Colchicine or placebo at home within 24 hours of diagnosis.

The team designed the study in the frenzied early days of the pandemic, when tests were hard to come by and doctors were often forced to diagnose COVID-19 based on symptoms alone.

About 300 of the trial participants never received a confirmatory lab test. If the untested participants are counted, the trial's results fall just short of statistical significance. If they are excluded, the study meets that crucial bar.

Among participants with lab-confirmed COVID-19, 93 of the 2,075 who took Colchicine, or 4.5 per cent, had to be admitted to hospital, compared with 123 of the 2,084 patients who took a placebo, or 5.9 per cent of that group. Twenty patients required mechanical ventilation and nine died in the placebo group, while 10 were ventilated and five died in the Colchicine group.

"A 25-per-cent relative risk reduction in hospitalization in patients with confirmed COVID is, I think, quite significant," Dr. Tardif said. "If we can reduce the congestion of the health care system by 25 per cent, that's considerable."

But Andrew Morris, an infectious disease physician and the director of antimicrobial stewardship at Toronto's University Health Network and Sinai Health System, has his doubts. He pointed out that approximately 70 infected patients would have to take Colchicine for 30 days to prevent a single hospital admission, something he said must be weighed against the side effects of the drug, notably persistent diarrhea.

"This is in no way a slam dunk," Dr. Morris added.

Marc Pfeffer, the Dzaou professor of medicine at Harvard Medical School, was more enthusiastic about the findings. He sat on the independent committee that monitored the trial.

After the numbers were crunched, the chair asked the committee members, including Dr. Pfeffer, whether they would take Colchicine if they tested positive for the coronavirus and had symptoms. "Each member said, 'yes,'" Dr. Pfeffer recalled in an interview.

The Montreal Heart Institute has applied for a patent for the use of Colchicine in COVID-19 under Dr. Tardif's name. However, Mélanie La Couture, the president and chief executive of the Montreal Heart Institute, said in a statement that Dr. Tardif has waived his rights in the patent application and, "does not stand to benefit financially at all if Colchicine becomes used as a treatment for COVID-19."

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